

REMARKS/ARGUMENTS

Claims 1-11 have been canceled. New Claims 12-24 are active in the case.

Reconsideration is respectfully requested.

The present invention relates to a composite pane that contains a film laminate.

Specification Amendments

The specification has been amended in order to introduce the required subsection headings into the text. Further a spelling correction has been made to page 2 of the specification. Entry of the amendments into the record is respectfully requested.

Claim Amendments

Support for new Claims 12-24 is found in the original claims. None of the new claims introduce new matter into the case. Entry of the new claims into the record is respectfully requested.

Claim Rejection, 35 USC 112, Second Paragraph

The issues that have been raised on non-reference grounds are believed to have been obviated in the newly presented claims. No new matter has been introduced into the case by the amendments that have been made. Withdrawal of the stated ground of rejection is respectfully requested.

Invention

The invention as claimed is directed to a composite pane that is formed of two rigid panes that are bonded together by an intervening assembly consisting of at least one colored

adhesive film and at least one uncolored adhesive film and having at least one intermediate layer having a thickness ranging from 10 to 100 μm positioned between the adhesive layers which effectively fuses to each of the adhesive layers such that the fusion bonding results in a uniform flattening of the mutually facing surfaces of the two adhesive films during production of the pane assembly.

Prior Art Rejection

Claims 1-4, 8, 10 and 11 stand rejected based on 35 USC 103(a) as obvious over Edwards, U. S. Patent 3,630,809. This ground of rejection is respectfully traversed.

Although the Edwards patent discloses a pellucid laminate that is formed from rigid panes, nevertheless, the interlayer structure of the rigid pane product is entirely functionally different from the claimed composite pane of the present invention, because the interlayer composite laminate is designed to selectively reflect infrared radiation while transmitting visible wavelengths of light. In order to achieve this effect a composite structure is formed from a multilayer dielectric film, a plastic supporting layer and a dielectric metal oxide layer. The laminate is bonded to the outer and inner rigid panes by means of layers of an adhesive such as polyvinylbutyral. On the other hand, the composite pane product of the present invention is constructed for the purpose of preparing a laminate that is comprised of differently colored adhesive films such that the optical disturbances caused by thickness fluctuations during the bonding process, although in an embodiment of the invention is so configured in its interlayer construction that the intermediate layer is formed of a metal-free film that reflects infrared radiation. In order to achieve this objective an interlayer composite structure consisting of a colored adhesive film/intermediate layer such as PET/uncolored adhesive film is employed in the product of the invention. There is, in fact, no teaching or

suggestion of a composite panel of this construction in the reference. Accordingly, withdrawal of the 103 ground of rejection is respectfully requested.

Claim 9 stands rejected based on 35 USC 103(a) as obvious over Edwards, U. S. Patent 3,630,809 in view of Cass, U. S. Patent 4,591,525. This ground of rejection is respectfully traversed.

Claim 9 is directed to a secondary aspect of the invention as it pertains to a preferred adhesive (PMMA) for at least one of the two adhesive layers, and as such is not an aspect of the invention upon which patentability depends. Moreover, the claim is dependent upon a claim (Claim 12) which has been shown above to be clearly distinguished over the primary reference of the rejection. The Cass patent contains no disclosure which brings the overall disclosure of the art of record closer to the invention as claimed. Accordingly, withdrawal of the rejection is respectfully requested.

Claims 1-4, 6, 7, 10 and 11 stand rejected based on 35 USC 103(a) as obvious over Moran, U. S. Patent Publication 2001/0046595. This ground of rejection is respectfully traversed.

The Moran reference discloses a rigid glass laminate which is substantially functionally not germane to the claimed composite of the present invention, because it discloses a composite laminate which is said to be intrusion resistant. The composite contains, as an intervening laminate, a structure of a PET layer sandwiched between two polyvinylbutyral layers. As disclosed in paragraph [0008] of the publication, the PET layer is of a thickness that ranges from 0.125 to 0.254 mm (125 μ m to 254 μ m) which is materially thicker than the thickness (10 to 100 μ m) of the intermediate layer of the laminate between the two outer rigid panes of the present invention. Thus, it is clear that the intrusion resistant glass laminate of the publication is different from the composite laminate of the present invention which prevents optical disturbances that are caused by thickness fluctuations that

occur during bonding. Moreover, there is no teaching or suggestion of an intervening laminate that is comprised of an adhesive polyvinylbutyral layer that is colored while the other adhesive polyvinylbutyral layer is uncolored. Accordingly, the outstanding ground of rejection is believed obviated and withdrawal of the rejection is respectfully requested.

Claims 1, 2, 5-8, 10 and 11 stand rejected based on 35 USC 103(a) as obvious over Von Alpen, U. S. Patent 5,496,643 in view of Salyer et al, U. S. Patent 3,923,757 and Oita et al, U. S. Patent 5,683,805. This ground of rejection is respectfully traversed.

The disclosure of the Von Alpen patent is of much the same technology of the glass laminate of the Moran reference, because the reference discloses a bombardment-inhibiting (bullet-proof) glass laminate that is formed of a plurality of silicate glass panels that are bonded together by adhesive layers. An intervening antiradiation reflecting film is positioned in the laminate structure of the glass pane of the reference. There is no disclosure anywhere in the reference of the interlayer construction of the present composite pane of the present invention which must consist of a colored polyvinylbutyral layer/intermediate polymer layer/uncolored polyvinylbutyral layer structure. Accordingly, the present composite pane as claimed is distinguished over the cited patent.

As to the Salyer et al and Oita et al patents, Salyer et al is believed not to be germane to the present invention, because it discloses a method of bonding a glass panel to a polycarbonate to form a specialty window. It contains no disclosure that brings the Von Alpen patent closer to the present invention. Oita et al, in disclosing the pigmentation of adhesive layers, does not show or suggest the specific layer construction of the intervening laminate of the present composite pane. Accordingly, the outstanding ground of rejection is believed obviated and withdrawal of the rejection is respectfully requested.

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Reply to the Office Action of October 19, 2005

It is believed that the application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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